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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	10/734,425
Filing Date	12/12/2003
First Named Inventor	S. S. P. Parkin
Group Art Unit	1762
Examiner Name	to be assigned
Attorney Docket Number	ARC920030070US1

04/14/2004

		ENCLOSURES (check all that apply)	
Fee Transmittal For	m	Assignment Papers After Allowance Communication to Group	on
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After Final		Petition Proprietary Information	
Affidavits/de	eclaration(s)	Petition to Convert to a Provisional Application Status Letter	
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Group Art Unit	1762	
Attorney Docket No.	ARC920030070US1	

METHOD OF PAYMENT	FEE CALCULATION (continued)	
The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:	3. ADDITIONAL FEES	
Deposit	Large Small Entity Entity	
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Applicant claims small entity status.	139 130 139 130 Non-English specification	
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2. Payment Enclosed: Check Credit card Money Order Other	112 920* 112 920* Requesting publication of SIR prior to Examiner action	
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1. BASIC FILING FEE	115 110 215 55 Extension for reply within first month	
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106 330 206 165 Design filing fee	128 1,960 228 980 Extension for reply within fifth month	
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102 84 202 42 Independent claims in excess of 3	146 740 246 370 Filing a submission after final rejection (37 CFR § 1.129(a))	
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SUBMITTED BY Complete (if applicable) Registration No. Name (Print/Type) Telephone 37,033 Daniel E Johnson 408-927-3367 (Attorney/Agent) Signature Date 04/14/2004

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : April 14, 2004

S Parkin : Group Art Unit: 1762

Serial No.: 10/734,425 : Examiner: Unknown

Filed: December 12, 2003 : San Jose, California

Title: Mg-Zn oxide tunnel barriers and method of formation

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents U.S. Patent and Trademark Office P. O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Under the provisions of 37 CFR § 1.97 through §1.99 and pursuant to Applicant's duty of disclosure under 37 CFR §1.56, Applicant respectfully brings the following document(s) listed on the attached form PTO-1449 to the attention of the Examiner in charge of the above-identified application. Copies of the listed document(s) are provided herewith.

This Information Disclosure Statement is being submitted before receiving a first Office Action on the merits for the above-identified patent application. (No fee is due.)

This submission does not constitute an admission that the cited reference(s) are relevant or material to the claims. The reference(s) are only cited as constituting related art of which Applicant is aware.

It is respectfully requested that the listed references be considered by the Examiner and formally made of record in this application.

The Director is hereby authorized to charge payment of any deficiency in the above fee(s) or to charge any additional fees required under 37 CFR § 1.16 or 1.17 or credit any overpayment to Deposit Account No. 09-0441. A duplicate copy of this authorization is attached for the Finance Branch.

Respectfully submitted,

S. Parkin

Daniel E. Johnson (#37)

Agent for Applicant Phone (408) 927-3367

DEJ:cgr

Attachments

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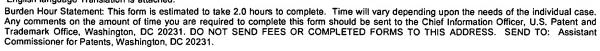
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Application Number	10/734,425	
Filing Date	December 12, 2003	
First Named Inventor	S. Parkin	
Art Unit	1762	
Examiner Name	Unassigned	_
Attorney Docket Number	ARC920030070US1	

		U.S. PAT	ENT DOCUMENTS	
Examiner Initials	Cite No. 1 Number - Kind Code 2 (if known	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US- 5,390,061	02-14-1995	Nakatani et al.	
	US- 5,465,185	11-07-1995	Heim et al.	
	US- 5,640,343	06-17-1997	Gallagher et al.	
	us- 5,650,958	07-22-1997	Gallagher et al.	
	us- 5,729,410	03-17-1998	Fontana Jr. et al.	
	US- 5,764,567	06-09-1998	Parkin	
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	US- 6,226,160	05-01-2001	Gallagher et al.	
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	US- 6,359,289	03-19-2002	Parkin	
	US- 6,388,268	05-14-2002	Kim et al.	
***************************************	US- 6,392,281	05-21-2002	Tsuge	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	US- 6,429,497	08-06-2002	Nickel	
	US- 6,535,365	03-18-2003	Lukaszew et al.	
	US- 2002/0076940 A1	06-20-2002	Hibino	
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	US- 2002/0097535 A1	07-25-2002	Ito et al.	
	US- 2002/0097537 A1	07-25-2002	Shimazawa	

		FORE	IGN PATENT D	OCUMENTS		
Examiner Initials	Cite No. ¹	Foreign Patent Document Country Code 3 - Number 4 - Kind Code 5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.qov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



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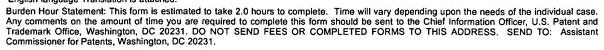
Complete if Known Substitute for form 1449A/PTO 10/734,425 **Application Number** INFORMATION DISCLOSURE December 12, 2003 **Filing Date** S. Parkin STATEMENT BY APPLICANT **First Named Inventor** 1762 Art Unit (use as many sheets as necessary) **Examiner Name** Unassigned 2 of 5 Attorney Docket Number ARC920030070US1 Sheet

		-	U.S. PAT	ENT DOCUMENTS	
Examiner Initials		Document Number Number- Kind Code ² (if known	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 2002/0114112 A1	08-22-2002	Nakashio et al.	
		US- 2002/0159203 A1	10-31-2002	Saito et al.	
	ļ	US- 2002-0163764 A1	11-07-2002	Nakazawa et al.	
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		US- 2003/0058685 A1	03-27-2003	Tran et al.	
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Examiner Initials	Cite No.1	Foreign Patent Document _Country_Code3 -Number4 - Kind Code5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
		JP 2000 322714	24-Nov-2000	Teruaki et al.	Abstract	
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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



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Group Art Unit	1762		
Examiner Name	Unassigned		
Attorney Docket Number	ARC920030070US1		

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		M. Julliere, "Tunneling Between Ferromagnetic Films", Physics Letters, Vol. 54A, Number 3, September 8, 1975, pp. 225-226.	
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Application Number	10/734,425	
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Group Art Unit	1762	
Examiner Name	Unassigned	
Attorney Docket Number	ARC920030070US1	

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
		XF. Han et al., "Fabrication of high-magnetoresistance tunnel junctions using Co75Fe25 ferromagnetic electrodes", Applied Physics Letters, Vol. 77, No. 2, July 10, 2000, pp 283-285.	
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		E. Popova et al., "Epitaxial MgO layer for low-resistance and coupling-free magnetic tunnel junctions", Applied Physics Letters, Vol. 81, No. 6, August 5, 2002, pp. 1035-1037.	
	***************************************	M. Tsunoda et al., "60% magnetoresistance at room temperature in Co-Fe/Al-O/Co-Fe tunnel junctions oxidized with Kr-O2 plasma", Appl. Phys. Letters", Vol. 80, No. 17, April 29, 2002, pp. 3135-3137.	
		XG. Zhang et al., "Effects of the iron-oxide layer in Fe-FeO-MgO-Fe tunneling junctions", Physical Review B, Vol. 68, 2003, pp. 092402-1 through 092402-4.	:
		S. Mitani et al., "Fe/MgO/FeCo(100) epitaxial magnetic tunneljunctions prepared by using in situ plasma oxidation", Journal of Applied Physics, Vol. 93, No. 10, May 15, 2003, pp. 8041-8043.	
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